

**REMARKS/ARGUMENTS**

**Status of Application**

Claims 1-8 and 10-26 are pending. Claims 1-22 were in the application as filed and claims 23-25 are new. The claims have been rejected or objected to as follows:

- claim 9 under 35 U.S.C. § 101 because it is claiming a tangible media storing a representation of an image;
- claims 1-8, 10-11, and 17-22 under 35 U.S.C. § 103(a) as being unpatentable in view of U.S. Patent No. 6,961,058 to Guo et al. ("Guo");
- claims 13 objected to because it is unclear whether the first color component and second color components are selected exclusively from the sets: {red, green, blue}, {cyan, magenta, yellow}.
- claims 12-15 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants have made the following claim amendments:

- amended claim 12 to incorporate the limitations of claims 10 and 11, while eliminating an unnecessary limitation in claim 12;
- amended claim 13 to clarify that the first and second color components are either both RGB or both CMY;
- amended claim 10 to cure minor informalities (not affecting the scope of the claim) and to add paragraphing and eliminate redundant wording;
- added independent claims 23 and 25, which correspond closely to method claim 1 and product claim 17, with the additional limitation relating to taking into account the object property regarding first and second color components of the lighting source; and
- canceled dependent claim 9 in favor of new independent claim 26.

Prior Art Rejection

As mentioned above, claims 1-8, 10-11, and 17-22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable in view of U.S. Patent No. 6,961,058 to Guo. Applicants respectfully request reconsideration and withdrawal of the rejections.

The claimed invention recites the a thickness map that characterizes geometric thickness of an object for rays from an illumination source, and use of the thickness map to determine an illumination contribution at a surface point. All the independent claims recite, one way or another, determining a plurality of thickness values associated with the surface point and *using the plurality of thickness values to determine a filtered thickness value, which filtered thickness value is used in determining the illumination contribution.*

Even if it is assumed for the sake of argument that Guo discloses or suggests the use of a thickness map, Applicants submit that there is no disclosure or suggestion of using a filtered thickness value based on multiple thickness values to determine the illumination contribution. Therefore, Applicants respectfully request that the Examiner reconsider the prior art rejection based on Guo, and allow the claims.

Applicants note with appreciation the indicated allowability of claims that recite taking into account the object property regarding first and second color components of the lighting source. Applicants have amended claim 12 to incorporate the limitations of claims 10 and 11. Claim 11 recites a relationship between thickness values of the one object versus a characteristic selected from the group: illumination attenuation, illumination transmission, while claim 11 recites that “the relationship comprises a first relationship between thickness values of the one object and illumination attenuation in a first color component, and a second relationship between thickness values of the one object and illumination attenuation in a second color component.” Applicants have incorporated the “attenuation or transmission” language in amended claim 12 so that claim 12 is broadened in this one respect. This is not seen to undercut the Examiner’s indicated allowability of claim 12.

Objection to Claim 13

As understood, the Examiner's objection to claim 13 as being unclear relates to the possibility that first and second color components could have been selected from different color sets. Applicants have amended claim 13 so that the first and second color components are selected from the same one of the RGB and CMY color component groups.

Rejection for Non-Statutory Subject Matter

The rejection of claim 4 for non-statutory subject matter is not entirely understood, and the citation to MPEP § 2106 does not provide guidance. Nevertheless, Applicants have canceled claim 4 in favor of a new independent claim 26 that is in a more recognizable product-by-process format.

Claim 26 recites in its preamble a "computer-readable tangible medium storing a representation of an image generated by a computer system performing the following method for determining illumination of surface points of an object in a scene from lighting sources." The claimed subject matter articulates a practical application and achieves a "useful, concrete and tangible result." Rendered images have commercial and/or esthetic and cultural value. The articulated steps reflect the limitations of claims 1, 2, and 3, which are believed allowable over the prior art for the reasons articulated above.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

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PATENT

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (650) 326-2400.

Respectfully submitted,



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